

Appl. No. : 10/010,281
Filed : December 5, 2001

REMARKS

Applicants have received the Office Action mailed June 18, 2003. Claims 1-14 are pending in this application. Since this response is being transmitted to the Office on September 10, 2003, this response is timely filed.

Amendments to the Claims

Applicants respectfully request entry of the Amendments to the Claims set forth above. The changes to the claims are fully supported in the specification, and thus there is no issue of new matter. In particular, Claim 1 has been amended to clarify that the asphalt/polymer composition comprises an asphalt and a substantially water-free polymer. Such an asphalt/polymer composition may be a polymer modified asphalt or a mixture of substantially water-free polymer and asphalt as described in the specification at, e.g., paragraphs [0004] and [0005]. Claims 2, 5-9 and 11-14 have also been amended for clarity. These changes do not narrow the scope of the claims.

Applicants reserve the right to file divisional and/or continuation applications containing claims directed to all or part of the subject matter described in the instant application, as well as the subject matter of any claims withdrawn, amended or canceled at any time during the prosecution of this application, and thus unclaimed subject matter is not dedicated to the public.

Information Disclosure Statements

Applicants acknowledge receipt of initialed copies of the PTO-1449 forms provided with the IDS's submitted by Applicants on March 7, 2002, and August 19, 2002. Applicants also acknowledge receipt of a signed copy of the PTO-1449 provided with the IDS submitted by Applicants on April 8, 2003 (listing U.S. 4,068,023, "Nielsen"). However, the Examiner's initials next to the Nielsen listing are not legible on the copy of that PTO-1449 form received by Applicants. Therefore, Applicants respectfully request a legible copy of the initialed PTO-1449 form submitted by Applicants on April 8, 2003.

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Claim Rejections - 35 U.S.C. § 112

Claims 9 and 14 have been rejected under 35 U.S.C. §112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicants regard as the invention. In particular, the Office states that Claim 9 does not make sense and that Claim 14 contains improper Markush language. Applicants respectfully submit that Claims 9 and 14 have been amended to correct these informalities, and respectfully request reconsideration and withdrawal of these rejections.

Claim Rejections - 35 U.S.C. §102

Claims 1-4, 7, 9-12 and 14 have been rejected under 35 U.S.C. §102(b) as being anticipated by U.S. Patent No. 5,811,477 ("Burris '477"). The Office states that Burris '477 discloses all of applicants' ingredients and method steps, including "substantially water-free synthetic polymer" in the form of fibers, citing Claim 37. Applicants respectfully traverse this rejection.

Claim 37 of Burris '477 depends from Claim 35, which recites a solids mix composition comprising polymer fibers. Claim 35, in turn, depends from Claim 34, which recites a composition prepared by the method of Claim 33. Claim 33, in turn, recites that "said solids mix composition is mixed with said polymer latex, said aqueous asphalt emulsion and said aggregate." Thus, Claim 37 is directed to a method in which the polymer fibers (contained in the solids mix composition along with other ingredients) are mixed with an aqueous asphalt emulsion. See, e.g., Burris '477 at col. 6, lines 1-24).

The instant claims are directed to a method in which an asphalt/polymer composition is provided, and specifically require that this composition be formed before the aqueous asphalt emulsion is formed. As described in the specification, an asphalt/polymer composition is first provided, e.g., formed as described in paragraph [0004], then emulsified with water to form an aqueous emulsion comprising the asphalt and polymer, e.g., as described in paragraph [0006]. Burris '477 thus fails to anticipate or render obvious the instant claims. Accordingly, Applicants respectfully request reconsideration and withdrawal of the rejection of Claims 1-4, 7, 9-12 and 14 under 35 U.S.C. §102(b) as being anticipated by Burris '477.

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Claims 1, 2, 9-12 and 14 have been rejected under 35 U.S.C. §102(a or b) as being anticipated by U.S. Patent No. 6,156,828 ("Wickett") or EP' 0 866 837 B1 ("Rubber Resources"). Applicants respectfully traverse these rejections.

The Office has taken the position that Wickett and Rubber Resources teach water, emulsifier, crumb rubber, particle size, polypropylene, and asphalt, specifically citing Wickett claims 1, 2, 5, and 9-14. However, Wickett discloses mixing polymer-containing compositions with asphalt emulsions, *see* Wickett at col. 1, lines 56-58 and col. 2, lines 29-34. In contrast, as discussed above, the instant claims are directed to a method in which an asphalt/polymer composition is first provided, then emulsified with water to form an aqueous emulsion comprising the asphalt and polymer.

Likewise, Rubber Resources discloses intermixing a rubber-containing emulsion with an asphalt emulsion, not with the asphalt prior to emulsification: "The present invention provides a rubber containing emulsion which is easily added to substantially any conventional asphalt emulsion post-mix. . . . The instant invention is used by post-mix addition into any of several asphalt emulsions with simple mixing." Rubber Resources at page 3, lines 1-2 and 29 (emphasis added).

Applicants respectfully submit that neither Wickett nor Rubber Resources teach or suggest the instantly claimed methods, and thus fail to anticipate or render obvious the instant claims. Accordingly, Applicants respectfully request reconsideration and withdrawal of the rejection of Claims 1, 2, 9-12 and 14 under 35 U.S.C. §102(a or b) as being anticipated by Wickett or Rubber Resources.

Claim Rejections - 35 U.S.C. §103

Claims 1-14 have been rejected under 35 U.S.C. §103(a) as being unpatentable over Wickett, Burris or Rubber Resources, in view of U.S. Patent No. 5,925,695 ("Ohtsuka"), U.S. Patent No. 5,539,029 ("Burris '029") or U.S. Patent No. 4,018,730 ("McDonald"). Applicants respectfully traverse these rejections.

The Office states that it would have been obvious to one having ordinary skill in the art, at the time the invention was made, to use the styrene-butadiene polymer of Ohtsuka in the compositions of the primary references in order to improve the binding of the asphalt and the

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aggregate and to melt the polymer and asphalt together as shown by McDonald in order to improve the uniformity of the dispersion. Applicants respectfully disagree.

The instant claims are directed to methods in which an asphalt/polymer composition is first provided, for example, formed as described in paragraph [0004], then emulsified with water to form an aqueous emulsion comprising the asphalt and polymer, e.g., as described in paragraph [0006]. The aqueous emulsion is then mixed with rubber particles to form a asphalt emulsion composition, e.g., as described in paragraph [0012].

As discussed above, the primary references fail to anticipate or render obvious the instant claims because they do not disclose or suggest a method in which an asphalt/polymer composition is first provided, then emulsified with water to form an aqueous emulsion comprising the asphalt and polymer. This defect is not remedied by combining the primary references with Ohtsuka and/or Burris '029, because neither of these references teach or suggest such a method. Applicants respectfully submit that, since the combination of references does not teach all of the limitations of the instant claims, there is no *prima facie* case of obviousness. See M.P.E.P. § 2143.

Applicants respectfully submit that the combination of McDonald with any of the primary references is improper because the cited art teaches away from making any of the asserted combinations of references. See M.P.E.P. §2143(X)(D)(2) ("It is improper to combine references where the references teach away from the combination."). Specifically, McDonald discloses heating asphalt and rubber to form a jellied reaction product, then admixing with a asphalt-rubber soap consisting essentially of water, an anionic water soluble emulsifying agent, a thickner, and the halide of an alkali metal or an alkaline earth metal to form a thixotropic emulsion capable of flowing as a liquid upon gentle agitation. See McDonald Abstract. The rubber-asphalt reaction product is prepared by a hot-mix process that involves heating the asphalt to a temperature in the range of from about 350° to about 500°F and adding particulate rubber thereto. See, e.g., McDonald at col. 2, lines 9-13.

Nonetheless, there exists no motivation to combine McDonald with any of the primary references because the art teaches away from the use of such hot-mix processing:

[P]revious methods of preparing asphalt-rubber compositions using rubber particles which required hot-mix conditions at temperatures above 300° F., and typically above 350° F., resulting in significant volatilization of rubber

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components including elemental sulphur, which forms highly toxic and undesirable hydrogen sulfide. Such hot-mix processing is impractical and/or unacceptable where environmental standards and air pollution controls restrict or prevent such methods.

Burris '477 at col. 1, lines 23-32 (emphasis added). In fact, Burris '029 specifically distinguishes itself from and criticizes the hot-mix process of McDonald (U.S. 4,018,730):

Heretofore, such paving compositions, including asphalt-rubber emulsions, have been prepared under hot-mix conditions requiring heating a paving grade asphalt with the particulate rubber. An example of such a method is disclosed in U.S. Pat. No. 4,018,730. However, heating of rubber, typically using old ground up rubber tires at the temperatures heretofore required for blending or mixing with the asphalt compositions, above 300° F., and typically between about 350°-500° F., results in significant volatilization of the rubber components including elemental sulfur which forms highly toxic and undesirable hydrogen sulfide. Such hot-mix processing is undesirable and unacceptable where environmental standards and air pollution controls restrict or prevent the use of such methods.

Burris '029 at col. 1, lines 14-25. Therefore, Applicants respectfully submit that because the cited Burris '477 and '029 references teach away from the hot-mix process of McDonald, there is no motivation to combine McDonald with the primary references.

Because a *prima facie* case of obviousness has not been established, Applicants respectfully request reconsideration and withdrawal of the rejections of Claims 1-14 under 35 U.S.C. §103(a) as being unpatentable over Wickett, Burris or Rubber Resources, in view of Ohtsuka, Burris '029, and/or McDonald.

Conclusion

Applicants respectfully submit that the instant claims satisfy the requirements for patentability in view of all of the prior art cited, searched, and considered by the Office, including the references listed in the PTO-1449 forms submitted to the Office on March 7, 2002, August 19, 2002, and April 8, 2003, and respectfully submit that the instant application is in condition for allowance, early notification of which would be appreciated. Should the Office disagree, Applicants respectfully request a telephonic interview to discuss any outstanding issues. The Office is respectfully invited to contact Applicants' representative at the telephone number provided below in this regard.

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This response is intended to be fully responsive to the aforementioned Office Action. However, if some matter or compliance with some requirement has been inadvertently omitted, Applicants respectfully request that they be given a new time period for reply under 37 C.F.R. §1.134 to supply the omission. See M.P.E.P. §714.03.

Please charge any additional fees, including any fees for additional extension of time, or credit overpayment to Deposit Account No. 11-1410.

Respectfully submitted,

KNOBBE, MARTENS, OLSON & BEAR, LLP

Dated: 9/16/03

By: Joseph J. Mallon
Joseph J. Mallon
Registration No. 39,287
Attorney of Record
Customer No. 20,995
(619) 235-8550

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